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Abstract

An influential line of argument holds that trade exposure causes economic uncertainty and spurs popular demands for compensatory and risk-sharing welfare state spending. The argument has gained renewed prominence through the recent work of Garrett (1998) and Rodrik (1997; 1998). This paper argues that the relationship between trade openness and welfare state expansion is spurious, and that the engine of welfare state expansion since the 1960s has been deindustrialization. Based on cross-sectional time-series data for 15 OECD countries we show that there is no relationship between trade exposure and the level of labor market risks (in terms of employment and wages), whereas the uncertainty and dislocations caused by deindustrialization have spurred electoral demands for compensating welfare state policies. Yet, while differential rates of deindustrialization explain differences in the overall size of the welfare state, its particular character -- in terms of the share of direct government provision and the equality of transfer payments -- is shaped by government partisanship. The argument has implications for the study, and the future, of the welfare state that are very different from those suggested in the trade openness literature.

Zusammenfassung

In vielen einflußreichen Diskussionsbeiträgen wird die Meinung vertreten, daß die Liberalisierung des Handels ökonomische Verunsicherung zur Folge habe und damit zu Forderungen nach ausgleichenden wohlfahrtsstaatlichen Ausgaben führe. Die Arbeiten von Garrett (1998) und Rodrik (1997;1998) verliehen diesem Argument zusätzliche Relevanz. Gegenstand dieser Untersuchung ist die Beziehung zwischen Ausmaß an Offenheit einer Volkswirtschaft und der Ausdehnung des Wohlfahrtsstaates, dessen großzügige Entwicklung seit den 1960er Jahren durch zunehmende Deindustrialisierung ermöglicht wurde. Auf der Grundlage von Analysen länderübergreifender Zeitreihen und von 15 OECD-Ländern wird gezeigt, daß kein Zusammenhang zwischen einer Handelsliberalisierung und dem Grad der Arbeitsmarktrisiken (bezogen auf Löhne und Beschäftigung) besteht. Angesichts der durch die Deindustrialisierung verursachten Unsicherheit kommt es jedoch von seiten der Wähler zu Forderungen nach einer ausgleichenden Sozialpolitik. Während das Ausmaß der Deindustrialisierung die Größe und Ausstattung des Wohlfahrsstaates determiniert, wird sein spezifischer Charakter - hinsichtlich der direkten Regierungsdienstleistungen und der ausgleichenden Transferzahlungen - von den Regierungsparteien geprägt. Diese Argumentation ist von großer Tragweite für die Analyse und Zukunft des Wohlfahrtsstaates; sie weicht gravierend von der Literatur über offene Volkswirtschaften ab.

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Introduction

It is commonplace to argue that the increasing openness of national economies has meant growing economic insecurity. This insecurity once supposedly fuelled demands for larger welfare spending as a form of insurance (Cameron 1978; Katzenstein 1985), but the rising tide of globalization is now widely seen as making the meeting of these demands well-neigh impossible, and, indeed, has worked to reduce the size and scope of government (Rodrik 1997). An alternative view is one that combines this "second image reversed" with a concern for the political power of labor and the left (Garrett 1995; 1998). This revisionist perspective suggests that the challenges promoted by globalization when met by strong left-labor power within the domestic political system combine to produce a compensation strategy that entails a large and vibrant welfare state. This paper challenges both of these views. Our argument, in short, is that most of the risks being generated in modern industrialized societies are the product of technologically induced structural transformations inside national labor markets. Increasing productivity, changing consumption patterns, and saturated demand for products from the traditional sectors of the economy are the main forces of change. It is these structural sources of risk that fuel demands for state compensation and risk sharing.

The transformation of labor markets in recent decades is revealed in a dramatic shift in the employment structure. The two traditional, and until recently leading, sectors of employment, i.e., agriculture and industry, have everywhere contracted. In 1960 an average of about 60 percent of total employment was in agriculture or manufacturing. Over a 31 years period this figure has been nearly cut in half. However, there is considerable variation in the speed with which this transition has occurred. In the United States, for example, only four and a half percent of the working age population lost employment in these sectors over the last three decades, whereas in countries such as France, Germany, Sweden and Denmark the comparable figure is fifteen percent or more. The numbers for six countries are shown in the first column of Table 1 (Appendix A provides data for a larger sample of 15 countries). Note that in addition to cross-national variance, the speed of the process has also varied a great deal over time, sometimes

exhibiting a slow and steady trickle of new redundancies, at other times resulting in headline-grabbing factory closings and massive layoffs.

[Table 1 about here]

Individuals face significant risks as a result of these shifts. Those thrown out of a job, or threatened by the loss of employment, may find that the skills they have acquired are not easily transferable to other parts of the economy where employment may be expanding, viz., the service sector. Even where employment is available, a job outside one of traditional sectors often entails significant losses in income, as well as the deprivation, at least in part, of pension rights, medical insurance, and other work-related benefits. For many, indeed, loss of employment in the traditional sectors entails complete removal from the active labor force. As one scholar notes, a significant part of this change in the occupational structure has taken place through the entry of young people into service employment and the early retirement of older workers from the traditional sectors (Blossfeld, 1992, p. 169). This is attested to by the dramatic reduction in employment activity on the part of older workers who have in one way or another been pushed into “early retirement” during the last few decades (Kohli, Rein, Guillemard, and van Gunsteren 1991).

Broadly speaking, governments have responded to the transformation of the employment structure in three distinct ways. The first has been to promote employment in private services, often by deregulating product and labor markets and allowing greater wage dispersion, while using various forms of public insurance to compensate workers for the risks of having to find new jobs in services. The United States is the archetypical example of this strategy, but Canada, the UK, and more recently also the Netherlands, share some of the same features. In the US, since the expansion of private service employment has exceeded the relative modest loss in the traditional sectors, employment rates in that country have actually increased (as indicated by the minus signs in columns C and F of Table 1).

The second strategy is for the state to maintain extensive regulation of private services, as well as a relatively compressed wage structure, while simultaneously expanding employment in public services. Countries that have heavily engaged in this sort of strategy, most notably in Scandinavia, have also generally managed to elevate the total labor force participation rate. On the spending side, the result has been a substantial rise in government consumption, often complemented by an expansion of the state's public insurance functions in order to compensate for the risks associated with often very large employment losses in the traditional sectors (see the numbers for Denmark and Sweden).

Finally, there are those economies where heavy regulation of labor and product markets have hampered a major expansion of private sector service employment, while at the same time the public sector has not been allowed to grow to any significant extent. In combination with the large losses that have occurred in the traditional sectors, this has led to a tremendous reduction in employment possibilities for those formerly active. Examples of states that have followed this route include Germany and France, and much of the welfare effort in these countries have been geared towards ensuring a relatively orderly and secure exit from the labor market, mainly through early retirement. Limiting labor force participation in this manner is expensive, and, depending of the severity of shifts in the occupational structure, is often supplemented by an increase in the state's insurance role (as in the other countries). This response therefore creates transfer- as opposed to consumption-heavy welfare states.

The three responses clearly resonates with Esping-Andersen's (1990) typology of welfare states (liberal, social democratic and Christian democratic), and we believe that partisan politics has played an important role in shaping these responses (see also Iversen and Wren 1998). By focusing on these major shifts in the labor market, and the partisan responses to these, we thus point to a causal structure that can help make sense of one of the most influential contemporary typologies of welfare states. The main focus of this paper, however, is to convince the reader that growth in both transfers and government consumption — the two main components of welfare state spending — can largely be explained as a function of the severity of internally driven

employment losses in the traditional sectors, *not* by forces in the global economy. Precisely because the underlying causal logic defines the available courses of political action, and hence helps us to account for the observed variance in welfare state forms, getting the causal story right is important. This is also important for the sake of understanding how the politics of the welfare state is likely to change in the future. Since the processes of globalization and deindustrialization have very different distributions in time and space, the pattern of welfare expansion (or contraction) should vary accordingly.

The remainder of this paper is organized into four sections. In the first we examine the arguments of two leading scholars, both of whom see the increasing integration of national markets into the international economy as the most powerful force affecting governments´ commitments to welfare spending. The evidence we present suggests that there is little empirical basis to sustain such a position. We then introduce and outline the logic of our own argument, focussing on the consequences of the employment dislocations connected to these major shifts in the occupational labor market structure since the early 1960s. In the third section this argument is tested on data for 15 OECD countries over a period of 33 years, followed by an analysis that defends our argument and results against the charges that deindustrialization is a result of either government spending itself or globalization. We conclude with a discussion of why domestic, as opposed to international forces, have been ignored in recent research, and we point to several areas where future research could prove fruitful.

Discounting globalization

The argument that globalization leads to welfare state expansion rests on two causal mechanisms. First, trade and capital market integration is said to expose domestic economies to greater real economic volatility which implies higher income and employment risks for workers. Second, greater labor market risks are hypothesized to generate political demands for expansionary spending policies that will cushion and compensate people for such risks. Rodrik (1998) focuses on the effects of trade, and explains the logic in the following manner:

> More open economies have greater exposure to the risks emanating from turbulence in world markets. We can view larger government spending in such economies as performing an insulation function, insofar as the government sector is the "safe" sector (in terms of employment and purchases from the rest of the economy) relative to other activities, and especially compared to tradables (p. 13).

Garrett (1998) affirms the trade openness argument, but argues that the logic extends to globalization more broadly, including growing capital market integration:

> [P]erhaps the most important immediate effect of globalization is to increase social dislocations and economic insecurity, as the distribution of incomes and jobs across firms and industries becomes increasingly unstable. The result is that increasing numbers of people have to spend evermore time and money trying to make their future more secure (p. 7).

Although Garrett's argument for capital market openness is novel, the trade openness thesis has a long history in political science, including the seminal works of Cameron (1978), Ruggie (1983) and Katzenstein (1985). To our knowledge the trade argument has not been subject to any serious challenges, and it stands out as the most important explanation for the rise of the welfare state since the Second World War. The role of capital market integration is more contentious because of the effects such integration may have on macroeconomic autonomy (Scharpf 1991; Kurzer 1993), but it is a logical extension of the trade openness argument.

We find it surprising that not more critical attention has been devoted to the alleged linkage between international economic exposure and labor market risks. Although it is undeniable that international market volatility increases labor market risks, whether *openness* is related to risk depends on the extent to which international market volatility is greater than domestic market volatility. It is not sufficient, for example, to show that international price volatility, measured as terms of trade instability, is related to spending (see Rodrik 1997, ch 3; 1998). In addition, at

least one of two conditions must obtain: i) price volatility in international markets is greater than in domestic markets, and ii) trade concentrates risks more than it diversifies it.

There are no theoretical reasons to expect the first condition to hold, and trade theory does not make strong predictions about the second. Although trade concentrates risks to the extent that it leads to specialization, it diversifies risks to the extent that it occurs across several national markets. Which effect dominates depends on the covariance of volatility across product and national markets. If specialization occurs within product categories that are exposed to similar cycles (complementarities), while trade occurs across national markets that are subject to different cycles, trade will actually lead to lower overall volatility. Since the bulk of trade within the OECD is intra-industry, and occurs across numerous national markets, there is little a priori reason to expect that trade is associated with greater volatility. But only empirical evidence can resolve the issue.

For this purpose we have compared volatility in output, employment, and wages across the manufacturing sectors of 16 OECD countries with very different exposures to trade (see Figure 1). Output and wages are measured in real terms, and volatility is defined as the standard deviation of annual growth rates between 1970 and 1993. This formula is identical to the one used in Rodrik (1998) to measure volatility in terms of trade, but here we are able to explore directly whether volatility in real variables is related to trade. As a baseline for the comparison, the figure shows the average volatility of a completely non-traded (but private) service sector — community, social, and personal services (indicated by the three dotted horizontal lines).[1]

[Figure 1 about here]

[1] The government sector *is* less volatile, but it does not make sense to include it in the comparison since it is supposed to be growing as a *consequence* of high volatility in exposed sectors.

Contrary to the logic of the trade openness argument, there is *no* relationship between the export dependence of manufacturing (measured as the value of exports divided by manufacturing value-added) and any of the volatility measures. The only variable weakly related to export dependence is output volatility, but the association is in the *opposite* direction of the one implied by the trade openness argument. Nor is there any evidence that the traded manufacturing sector is more volatile than the average for the nontraded service sector. Finally, it is noteworthy that there is no association between the level of volatility and Katzenstein's distinction between small corporatist welfare states and large liberal (or statist) ones.

If we changed the x-axis in Figure 1 to measure capital market openness instead of trade openness, the pattern would be no clearer. It does not appear to be the case that greater openness to the international financial system increases the volatility of the domestic real economy. Moreover, even if that proved to be the case, greater exposure to speculative capital flows may well be associated with a countervailing reduction in the capacity of governments to respond to pressures for compensation.

But if these findings are correct, how is it possible that previous work has found such a clear link between globalization (especially trade openness) and spending? To answer this question we would like to draw attention to some important methodological issues in this work. Katzenstein (1985) never presents any systematic evidence that openness and spending are related. Instead, he describes how policy-making in small and open economies have led to a substantial expansion in the government's role in the economy. Clearly, it is difficult to assess whether this is due to trade-openness or some other feature that these countries have in common. Cameron (1978) offers some cross-sectional evidence, but this is in the form of correlation coefficients or very simple regressions that fail to control for a number of factors (such as the size of the dependent population) which we now know are important. In fact, our data support Cameron in the sense that there *is* a cross-sectional association between the two variables, but this relationship does not hold once proper controls are included in the statistical model (as we shall see). In the case of Rodrik (1997; 1998), both cross-sectional and pooled time-series evidence is presented, but the

analysis includes a large number of less developed, and mostly non-democratic, countries for which our argument is not necessarily applicable.[2]

The results that are most relevant for our purposes are presented by Garrett (1998). Not only does Garrett focus on the same countries that we do, he also includes capital market integration in his analysis. Furthermore, Garrett's analysis picks up both cross-national and cross-time variance, and allows for multiple controls. It is therefore of considerable interest to replicate and further examine Garrett's results, as we have done in Table 2. The first two columns of the table replicates Garrett's results using change in government transfers and in civilian government consumption as the dependent variables.[3] First note that the results for trade openness are weak and statistically insignificant. Somewhat surprisingly, Garrett's own results do not support the trade openness argument. On the other hand, the coefficient for the interaction between what Garrett calls left labor power and capital market openness is positive and statistically significant, supporting Garrett's thesis that open capital markets leads to higher spending when the political left is strong and unions are encompassing (left labor power is a composite index of these variables).

[Table 2 about here]

[2] Indeed, trade openness may be more salient for less developed countries because trade in many of these cases, unlike trade between OECD countries, has led to heavy dependence on a few primary commodities which are subject to high international price volatility.

[3] Our thanks to Geoffrey Garrett for generously providing us with the data he used in his analyses and thereby allowing us to replicate his findings. Note that Garrett uses levels of spending on the lefthand side, but this formulation gives an exaggerated estimate for R-squared since the lagged dependent variable will pick up most of the cross-national variance. Using changes in spending on the lefthand side avoids this problem while leaving the estimated coefficients the same. In mathematical terms, we are simply subtracting the lagged dependent level variable on both sides of the equal sign, which obviously leaves the coefficients for all variables unchanged.

These results, however, turn out to be highly sensitive to the precise specification of the control variables. One of these controls is GDP growth which Garrett (1998, p.80) explains with reference to an article by Roubini and Sachs (1989). In that article the authors argue that governments make spending decisions based on economic forecasts which rely on actual growth in the recent past. If growth turns out to be unexpectedly high, spending as a proportion of GDP will be smaller than anticipated, while spending will be higher if GDP growth is unexpectedly low (Cusack, 1997, 1999). They therefore define an unexpected growth variable which is the difference between actual growth in a given year and average growth in the previous three years. This variable is obviously correlated with GDP growth, but it is not identical, and we have consequently substituted Roubini and Sachs' variable for Garrett's simple GDP growth variable in columns 3 and 4.

In addition, we made some refinements to the variables intended to remove non-discretionary components of spending. In the case of transfers the relevant controls are the rate of unemployment and the size of the old age population. These variables can be improved by taking account of the fact that the generosity of transfers varies across time and countries. A more accurate measure for non-discretionary transfers would therefore be to multiply the change in the size of the dependent population (i.e., the proportion of unemployed and old people) by the generosity of transfers at any given point in time. In turn, generosity can be measured as the share of transfers in GDP relative to the share of the dependent population in the total population (Cusack, 1997, 1999). This composite variable is used in column 3 in place of the unemployment rate and the old population rate.

In the case of government consumption the number of unemployed and old people is irrelevant (as Garrett's results clearly show), but there is a different non-discretionary effect that Garrett does not take into account. Because costs in public services (especially wage costs) tend to increase at the same rate as in the rest of the economy, while productivity does not, a constant level of provision will result in prices on government services rising faster than in the economy

as a whole. This non-discretionary component of government consumption can be removed by another measure, called automatic consumption, which is the share of government consumption in GDP times the relative rate of growth in the price deflator for government services divided by the rate of growth in the price deflator for the entire GDP (Cusack, 1997).

From the rise in explained variance, we can see just how important relative price changes are for government consumption. More importantly, the effects of capital market openness completely disappear once these refined controls are included. This is the case whether we look at consumption or transfers. With respect to trade openness, one can see that the parameter on this variable is insignificant as before, but the sign on the interaction term is now actually in the wrong direction. In short, there is no suggestion in Garrett's data of a relationship between globalization and welfare state spending once we use more refined control variables. The only result that holds up is that left-labor power has a significant expansionary effect on government consumption — a finding that is echoed in the more extensive analysis presented below. Of course, this does not undermine Garrett's main conclusion that globalization is compatible with a large welfare state, but it does suggest that we have to seek the explanation for the expansion of the welfare states in domestic rather than in international conditions.

Deindustrialization and the Labor Market Risk Structure

As do Garrett and Rodrik, we believe that exposure to risk in the labor market is a powerful determinant of peoples' preferences for state protection and public risk sharing. Unlike Garrett and Rodrik, however, we believe that the main sources of risk are to be found in domestic economic processes. In particular, we argue that the labor market dislocations associated with major shifts in the occupational structure have been a driving force behind the expansion of the welfare state since the early 1960s. To get a sense of the numbers, in 1960 about 60 percent of the labor force in the OECD area was employed in agriculture or industry; 35 years later this figure was down to about 30 percent. As we document below, this massive sectoral shift is the outgrowth of deep forces of technological change that have coincided with progressive market saturation and shifting patterns of demand -- structural-technological conditions that also

characterized the industrial revolution. Given what we know from the work of Esping-Andersen (1985, 1990), Korpi (1978, 1983), Stephens (1979), and others about the relationship between the rise of industry and the early development of the welfare state, one would expect such a massive transformation of the occupational structure to be of great importance in the demand for, and supply of, welfare state programs.

Changes in the occupational structure are mediated by the transferability of skills and social benefits. Transferable skills protect against market vagaries by making individuals less dependent on a single employer, or on employers in a particular branch of the economy. Labor market risks are therefore generated across the interfaces between economic sectors requiring very different types of skills. This logic is reinforced when we consider that privately provided social benefits such as health insurance and pensions also tend to be constrained by the transferability of skills. The reason is that when skills are firm-specific, employers have an incentive to provide non-transferable company benefits, both as a tool of control over its workforce, and as an incentive for their employees to acquire additional firm-specific skills. Correspondingly, if skills are industry-wide, there is a rationale for employers in that industry to provide benefits that are transferable across firms, but only within the industry. Although the latter depends on the ability of employers to collude in the provision of both skills and benefits, the point is that *the transferability of benefits will not exceed the transferability of skills in the absence of state intervention*.

The approximate correspondence between the scope of employer-sponsored insurance and the transferability of skills tells us a great deal about the sources of demand for welfare state expansion. Once a worker is permanently dismissed from a firm or occupation within a sector, and has to transgress the interfaces defined by skill discontinuities, both skills and benefits will be forfeited or downgraded. In some cases this means that workers are left outside employment with no or few means of support; in other cases it means that workers find new jobs at substantially reduced wages and benefits levels. It is therefore only through the mediation of the state that workers can protect themselves against the risks of major shifts in the economic and

occupational structure. Such protection comes in the form of state-guaranteed health and old age insurance (which makes it possible to move across sectoral interfaces without losing benefits), as well as through early retirement and certain forms of disability insurance which facilitate a relatively painless exit from the labor market (and therefore makes it possible *not* to have to move across the skill interfaces). When skills and benefits do not travel well, while large numbers of people face the risks of having to make such "travels", demand for state-sponsored compensation and risk-sharing will be high.

Like the distinction between agriculture and industry in the previous century, the distinction between manufacturing and services represents one of the most important economic interfaces affecting the transferability of skills. Most skills acquired in either manufacturing or in agriculture travel poorly to services occupations. Even low-skilled blue-color workers find it hard to adjust to similarly low-skilled service sector jobs because they lack something that, for lack of a better word, is called "social skills". Although there are other economic interfaces -- between manufacturing industries, types of services, etc. – the one between agriculture and manufacturing, on the one hand, and services is a particularly difficult one to traverse. This is why the decline of employment in the primary and secondary sectors of the economy is of great importance for understanding the demand for welfare state spending, whether in the form of transfers or in the form of jobs in the public sector.

Considering this obvious link between labor force transformations and welfare state spending, it is truly remarkable how little attention deindustrialization has been accorded in the study of welfare state dynamics. Not a single large-N, cross-national study of the welfare state has to our knowledge focused on deindustrialization as a driving force, or even included it as a control variable. Perhaps this omission is due to a misconception that deindustrialization is uniform across countries, and therefore cannot explain cross-national variance in the speed of welfare state expansion. In fact, however, deindustrialization varies greatly in time and space. For example, in an early industrializing country like the United States, industrial employment as a

percentage of the adult population declined by only 3 percentage points between 1960 and 1995, whereas for a late industrializer like Sweden, the figure is 13 percent.

Both the magnitudes of the sectoral shifts in employment, and the cross-national differences, are magnified by the decline of agriculture. Although we usually associate agricultural decline with the *rise* of industry, the two processes started to move *in phase* in the early- to mid-1960s, particularly in countries that industrialized late. Agricultural decline is due to the same forces of structural-technological change -- explored in a subsequent section -- and when we talk about deindustrialization in the following we have in mind this secular, long-term and structurally-driven process of labor shedding in *both* agriculture and industry beginning in the early 1960s.

While we maintain that deindustrialization is a crucial (and neglected) source of welfare state expansion, we are not implying that political and institutional factors are unimportant. The welfare state is a mechanism for redistribution as well as risk-sharing, and we would therefore expect partisan governments and organized interests to shape social policies in order to benefit the distributive interests of their own constituencies. As argued by Garrett (1998), where unions are strong and centrally organized, and where left governments have been dominant, the welfare state can be expected to assume a more redistributive form. Likewise, redistribution is affected by the location of the median voter insofar as political parties adopt policies that will appeal to the median voter.[4] The lower the income of the median voter, and the more exposed to risk, the greater the pressure for redistributive policies (Meltzer and Richard 1981). Since low-income workers in tenuous labor market positions are less likely to vote than better educated and higher-income people (Lijphart 1997), an indirect measure of the median voter location is the extent of participation in national elections.

The explanatory salience of these variables depends on the extent to which we look at spending categories that have a redistributive effect. Aggregate levels of transfers are not necessarily

[4] In two-party systems the mechanism is vote maximization (Downs 1957; Cox 1990); in multi-party systems it is office maximization (Laver and Schofield 1991).

higher under left than under right governments insofar as such transfers can be used to address labor market risks without affecting income or status differentials (Esping-Andersen 1990). By contrast, government service provision is inherently redistributive because it offers people equal access to services -- such as education, health care and housing -- which are paid for through taxation. In addition, egalitarianism and public sector expansion are causally related because earnings compression undermines the growth of low-productivity, price-sensitive, private service sector jobs and puts pressure on the government to provide jobs in the public sector (Esping-Andersen 1993, 1994; Iversen and Wren 1998; Glyn 1997). So while deindustrialization everywhere propels growth of welfare state spending, whether in the form of government transfers or consumption, we expect the distributive aspects of the rising service economy, and the private-public sector mix of employment, to vary according to political parameters.

Findings

We use an error correction model of the type introduced in Table 2, with changes in government transfers and civilian government consumption as the dependent variables. The model has the following form:

$$\Delta Y_{t,\,i} = \alpha + \beta_1 \cdot Y_{i,\,t-1} + \sum \beta^j \cdot X^j_{i,t-1,} + \sum \beta^j_{\Delta} \cdot \Delta X^j_{i,t,},$$

where Y is a spending variable, and X is an independent variable. The subscripts t and i refer to the particular time period and country, respectively, while the superscript j refers to the particular independent variable. Δ is the first difference operator.

Note that the independent variables have been entered as both lagged levels -- X_{t-1} -- and as first differences -- ΔX_t. Although not intuitively obvious, it can be shown that the parameter for a *level* variable measures the permanent (or long-term) effect of a one-off change in that variable while the parameter for a *change* variable measures the transitory (or short-term) effect of a one-off change in that variable (Beck 1992). If a variable exhibits only transitory effects, unless it changes continuously, spending will eventually revert back to its original level (assuming that the

parameter for the lagged dependent level variable, $\beta_{1,}$ is between 0 and -1). Since all the theoretical variables are defined as proportions (either of GDP or of the working age population), they cannot grow (or fall) indefinitely, and will therefore have no long-term effects on spending *unless* the parameters for the their lagged levels are significant.[5] Hence, the parameters for the change variables are only relevant for examining the specific time dynamics of an independent variable, and we have only included first differences for those independent variables that are of particular theoretical interest.

We use fairly much the same set of explanatory variables for both transfer spending and civilian government consumption outlays. The exact variable definitions and data sources are summarized in Appendix B. The only difference between the two specifications is the "autonomous" spending term in each equation. In the equation for transfers, this item is based on the prevailing level of generosity of the program (at time t-1) times the first difference in the size of the clientele for such programs. In the equation for government consumption, the autonomous spending term is a function of the prevailing level of spending (at time t-1) times the rate of change in the relative prices confronting government. As discussed above, in both instances the argument is that there are non-discretionary elements to spending which needs to be eliminated in any well-specified model.

In addition to the lagged level of the spending component, there are four sets of variables in each specification. First, there is a set of variables meant to detect whether international or domestic economic sources are driving spending. On the international side, we have included measures of trade openness as well as capital mobility. On the domestic side, we have introduced a measure for deindustrialization which is defined as 100 minus the sum of manufacturing and agricultural employment as a percentage of the working age population. The base of 100 is somewhat arbitrary. For example, one could have used the peak of employment in agriculture and manufacturing as the base; a number that varies across countries. However, the statistical

[5] This does not *have* to be the case. One of the control variables, unexpected GDP growth, can in principle rise indefinitely.

analysis is insensitive to the choice of base due to the inclusion of a full set of country dummies.[6] If each country has a unique base, it simply alters the nationally specific intercepts, and the dummies permit these to take on any value.

The analysis also includes a variety of political variables. These are the level of electoral turnout, the left-right partisan composition of the government, and a measure of the relative strength of labor within the industrial relations system. In addition, we have included a variable that measures the decentralization of the political decision-making process in order to capture the notion that diffusion of power affords minority groups opportunities to block legislation that would change status quo, and hence spending levels (Huber, Ragin and Stephens 1993).[7] The remaining control variables have already been introduced in the discussion of Garrett's results.

The equations have been estimated using a pooled data set with 15 countries and a temporal domain ranging from 1961 up to and including 1993, a period of 33 years. Tests for heteroskedasticity in both pooled regressions suggested the need to correct for this problem and so we employed Beck and Katz´s (1995) method for deriving panel corrected standard errors. The final results for both pooled analyses are presented in Table 3.

[Table 3 about here]

The findings for the transfer spending equation are presented in column 1 of the table. Note that none of the globalization variables registers a statistically significant impact on the spending variable. By contrast, both the level and change in deindustrialization have coefficients that take on the expected signs, and are statistically significant at a .01 level or better. In substantive terms, the impact of a one percent decline in employment in the traditional sectors is to elevate the long term target equilibrium for social transfer spending by approximately .4 percent. The results thus

[6] An F-test indicates that the country dummies belong in the model.

[7] We wish to thank John Stephens for making this variable available to us.

suggests that the forces of change that have propelled the expansion of transfer payments over the past three decades are to be found in domestic economic processes, *not* in the global economy.

None of the political terms register any impact. As discussed previously, the *level* of transfer payments is not necessarily a contentious partisan issue unlike the distributive *composition* of such payments. As Esping-Andersen notes, "there is no reason to expect that expenditure commitments, as such, should be related to left-party power" (1990, 115). Right as well as left governments, exposed to the pressures of democratic politics, recognize the need to address the risks that people encounter in the labor market, and these risks are largely captured by the deindustrialization variable. Where they obviously differ is in terms of whose interests in the electorate are accorded more or less attention, and this is a distributive issue to which the aggregate level of transfers does not speak.

In this respect the logic of government consumption is very different since public provision of services directly reduces inequalities in peoples' access to education, health care, etc., and because public employment is used by left governments to support egalitarian wage policies (Esping-Andersen 1990; Iversen and Wren 1998). Unsurprisingly, therefore, all of the political variables turn out to affect civilian government consumption in the predicted direction. Thus each percentage increase in the electoral participation rate raises the target level of spending by about .15 percent. Likewise, a typical left government spends about 2 percent more than a typical right government if we look at the long run.[8] The strength of labor in the industrial relations system also has an upward effect on spending, as expected, whereas decentralized government structures, as predicted by Huber, Ragin and Stephens (1993), tend to reduce spending.

In terms of the globalization variables, trade and capital market openness both exhibit small significant effects on consumption, but for capital mobility the effect is entirely transitory, while for trade it goes in the opposite direction of that predicted by the openness argument. It is

[8] A typical left government is defined here as one that is one standard deviation to the left of the mean on the partisan government variable. A typical right government is defined similarly.

conceivable that the negative effect for trade reflects its differential welfare effects. Thus, while growing exposure to competition from low wage countries raises the risk for those already at high risk (Wood 1992; Leamer 1984, 1996), trade may well be welfare-improving for all others (Rodrik 1997, ch. 4). Whatever the explanation, the magnitude of the effect is small. Thus, for each percentage point that the foreign sector grows, the long-term equilibrium level of civilian government consumption declines by only .07 percent.

Compare these results to those for deindustrialization. For each percent decline in employment in the traditional sectors, the target level of civilian government consumption is raised by nearly .6 percent. The short-term impact is to elevate the actual spending level by .1 percent for every percent decrease in employment in the traditional sectors. If we combine these results with the equally strong results for government transfers, it is clear that the effects of the domestic economic variables are far and away more important than globalization in shaping government spending.

Another feature of the findings deserves emphasis: The effect of de-industrialization *persists* over time. Apparently spending gets "locked in" by organizational and institutional factors that are exogenous to our model. As argued by Pierson (1994, 1996), spending itself creates political clienteles that will press for further spending and resist attempts at retrenchment. Hence, even though the process of de-industrialization is the causal agent in the expansion of the welfare state, the disappearance of this causal agent will not necessarily lead to retrenchment -- "merely" retard further expansion. However, the character of the political game over welfare policies is likely to change when compromises involving overall expansion are no longer feasible; a conjecture that deserves further exploration considering that the process of deindustrialization is coming to a halt in many countries.

The Sources of Deindustrialization

Our results strongly suggest that deindustrialization, not trade or capital market openness, is the driving force behind the expansion of government spending on both transfers and services. Nevertheless, it could be objected that deindustrialization may itself be a consequence of trade and financial openness, or that it is caused by, not causing, government spending. Even though either one of these possibilities are interesting in their own right, they would obviously radically alter our understanding of the relationship between deindustrialization and spending. In order to complete our argument, we therefore have to show that deindustrialization is largely driven by domestic factors other than spending itself.

Economists are divided on the question whether trade causes employment losses in the traditional sectors. On one side of the debate, reflecting not only a particular economic theory but also a generally popular view (the “giant sucking sound”), is the idea that the sources of deindustrilization in the West during recent decades lays squarely in the competitive pressures emanating from Third World producers (see, e.g., Wood, 1994, and Saeger, 1996, 1997). From this perspective, changes in the North-South trade have been estimated to account on average for 50 percent of the reduction in manufacturing that occurred between 1970 and 1990 (Saeger, 1997, p. 604). In addition, it can be argued that the removal of restrictions on capital makes it increasingly easier for businesses to relocate production facilities to countries with lower wage costs, and that this in turn diminishes the demand for labor within the industrial sectors of the advanced market economies (Streeck 1997).

The alternative school, while not denying that trade has played a role in deindustrialization, sees the principal causes as residing in domestic sources (Rowthorn and Ramaswamy, 1997, 1998; Krugman, 1996). Among these are changing preference patterns away from manufactured goods and towards services, high productivity growth in the face of inelastic demand, as will as the associated changes in investment in new productive capacity (Rowthorn and Ramaswamy, 1998, p. 19). North-South trade accounts for at most one-sixth of the loss in manufacturing employment in these studies.

Furthermore, it may indeed be the case that the welfare state is itself responsible for the decline in employment in the traditional sectors. As Bacon and Eltis (1976) have argued, both the costs posed by taxation as well as the generosity of the modern welfare state, including the opportunity to work for at least equivalent if not higher wages in the public sector, have had a tremendous negative effect on industrial employment. Of course, this is also a view that is popular with political parties and governments of a neo-liberal bent. Unlike the trade argument, however, there is little systematic empirical evidence to support the idea.

Figure 2 provides some descriptive evidence on the question of whether trade causes deindustrialization. It plots the loss of employment in the traditional sectors from 1962 through 1991 against the average trade openness for the same period. There is little hint of any relationship. Indeed the correlation between the two series is about 0.17.

[Figure 2 about here]

Alternatively, if one were to adopt the hypothesis that deindustrialization has more to do with internal processes, processes of productivity gain and shifting tastes, then one would expect that a process of convergence has been underway. Thus, early industrializers which had pretty much gone through this transformation by the beginning of this period would have suffered the least loss of employment in the traditional sectors, while late industrializers would have experienced more rapid decline. As Figure 3 demonstrates, there seems to be a fair amount of support for this position. The correlation between employment intensity in the traditional sectors in the year 1962 and the loss of employment in these sectors over the three succeeding decades is about .85. Thus, the United States, which had the smallest traditional sectors (about twenty four percent), experienced the smallest loss (less than five percent), while Finland, lagging well behind the United States and having nearly fifty percent of its working age population engaged in the traditional sectors, experienced the largest loss in the sample of fifteen countries, well over twenty percent.

[Figure 3 about here]

But descriptive, and indirect, evidence of this nature can sometimes be misleading. We have therefore estimated a pooled cross-section time-series model which uses the change in the log of the number of people employed in manufacturing and agriculture as the dependent variable (see Table 4).[9] This is a standard setup in the existing literature except that we have included agricultural employment on the right-hand side to make the results speak directly to our deindustrialization variable. However, the results are very similar if we focus exclusively on manufacturing employment. The analysis includes 14 OECD countries for which we had complete data in the period from 1964 through 1990.[10]

For presentational ease Table 4 divides the independent variables in a group of domestic variables, and a group of international, variables. Following the existing economic literature we include among the domestic-structural variables, (i) a measure of productivity growth, (ii) the log of income per capita and the square of this variable to capture changing consumption preferences, (iii) the growth in per capita income as a measure of demand effects, (iv) gross capital formation as a share of GDP, and (v) the two spending variables. For the exogenous variables we have included (vi) the balance of trade with OECD, with OPEC and with less developed countries (LDCs), and (vii) the capital market openness variable used above.

[Table 4 about here]

The productivity measure is meant to capture the tendency for firms to shed workers as productivity increases. Note that there is some theoretical ambiguity with respect to the impact of

[9] As in the previous analysis, problems of heteroskedasticity led us to employ Beck and Katz´s (1995) method for deriving panel corrected standard errors.

[10]The countries include: Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Sweden, the United Kingdom, and the United States. Missing data problems precluded adding Switzerland. The time frame is the maximum possible given the availability of data.

this variable. While faster productivity growth makes goods relatively cheaper, and therefore boosts demand, less labor is required to produce the same amount of output. Research, however, has shown that the latter effect tends to dominate the former. For the income terms, the expectation is that the parameter on the first term will be positive while that on the second term is negative, signifying that as income passes beyond a certain level the relative demand for goods in both the agricultural and manufacturing sectors will begin to decline. The effects of capital formation and growth in income are expected to be positive since both will boost production and demand for labor.[11]

The results are generally very supportive of our argument. Deindustrialization is almost exclusively driven by domestic factors *other* than the welfare state. Technological progress, demand conditions, and shifting demand patterns are what cause employment in industry and agriculture to decline. There is no evidence that government spending has "crowded out" employment in the traditional sectors; every indication is that the causal arrow goes in the opposite direction. Nor does trade appear to be an important source of deindustrialization. A negative trade balance with other industrialized countries (and the first difference in that trade balance) *does* hurt industrial employment, but the effect is substantively small and cannot have been a major cause of deindustrialization across the OECD area for the simple reason that intra-OECD trade is relatively balanced over time.

The crucial question with respect to trade is whether growing trade with less developed countries has priced out a substantial number of workers in agriculture and industry in the advanced countries. We find no evidence to that effect. The coefficients on the lagged levels of the trade balances with OPEC countries and with Third World countries are both negative and statistically significant, while both of the coefficients on the first differences in these two variables are statistically insignificant. Note, that these results, which suggest that positive trade balances with the OPEC and Third World countries *lower* employment while negative balances promote

[11] Investment is measured as a percentage share of GDP. It took is taken from the Penn World Tables, Version 5.6.

employment, are not the consequence of multicollinearity. Nor do their effects change in substantive terms when we use alternative specifications of the model. We have run a large number regressions using a variety of combinations of trade balances and import penetration, and the results are all contrary to the "trade leads to deindustrialization" hypothesis. In fact, the results in Table 4 are the strongest we have been able to produce in support of the popular perception.[12] The same is the case for the capital market openness variable which consistently fails to produce effects that are statistically distinguishable from zero.

Our results essentially replicates those in Rowthorn and Ramaswamy (1998), even though our data and model specification are somewhat different. Deindustrialization is driven by deep economic processes that are unrelated to either openness or spending. Productivity growth in the traditional sectors leads to a loss in employment, whereas rising demand through growing investment or incomes have a positive effect. Consistent with Engel's law, the results also indicate that demand for agricultural and manufacturing first rises with income and then falls at higher levels, thereby eventually diminishing the level of traditional employment. We conclude form this analysis that the causes of government spending are robust to both the charge that deindustrialization is a mediating variable, and to the charge that its association with spending is a result of reversed causality.

Conclusion

The domestic effects of the international economy has been increasingly emphasized in political-economic theory as well as popular accounts. While there is no denying that international trade and financial liberalization have heightened interdependence among states and played an ever more important role in shaping public policy, the causal primacy of these factors in shaping the dimensions of the welfare state appears to be greatly exaggerated.

The mirror image of the exaggeration of global factors is the neglect of domestic forces of change -- forces of change that are driven by technological advance and shifting demand patterns.

[12] The results of alternative specifications are available from the authors upon request.

These forces have caused massive shifts in the employment structure, the most notable being the shift from manufacturing to services. Because people often lack skills that travel well between these sectors, deindustrialization poses significant risks to those workers who are threatened by displacement. Given that employer-provided social insurance is limited by firm or by industry, these risks can only be addressed through government expansion of social security and public employment.

Why has the role of deindustrialization been ignored in explanations of welfare state expansion? We suspect that one reason is a misconception that the shift in the employment structures is relatively uniform across countries, a common mistake in political science (Pontusson 1995). As we document in the introduction to this paper, there is in fact tremendous variation in the extent of deindustrialization, and our empirical results demonstrate that this factor can account for very significant proportion of the variance in welfare state spending. Another reason for the omission is undoubtedly an outgrowth of the idea, deeply ingrained in most of our theories of comparative political economy, that the rise of the welfare state is linked to strength of the industrial working class. What our analysis suggests is that *any* major transformation in the employment structure, whether from agriculture to industry or from industry to services, produces insecurities in the labor market which propel demands for state intervention.

Governments of all political stripes have responded to these demands by expanding transfer payments and social service provision. Nevertheless, partisanship continues to be important in the redistributive aspects of the welfare state. This shows up clearly in the results for public consumption, which has expanded much more rapidly in countries where the left is strong. We would conjecture that the same is true for transfer payments if we look at the composition, rather than the level, of spending.

In fact, there are reasons to expect that deindustrialization will be associated with increasingly distinct partisan effects. First, due to gaps in productivity growth across sectors, egalitarian policies tend to inhibit the expansion of private service sector employment, which present the

government with an increasingly clear choice between either excluding more and more people from the labor market, or employing more of them in public service sector jobs. Second, with the process of sectoral transformation coming to an end in many countries, the political support for further welfare state expansion is likely to wane, whereas distributive conflicts over existing welfare state programs are likely to intensify. We believe that these political aspects of deindustrialization are promising areas for future research.

Appendix A: Complete data for changes in employment structure

		A Loss in Manuf. & Agric.	*B* Gain in Priv. Services	*C* *A* Not Absorbed by *B*	*D* Change in Gov.t Civ. Serv.	*E* Change in Military	*F* Not Absorbed
USA	1970	0.28	1.65	-1.37	0.70	-0.44	-1.63
USA	1980	1.92	5.20	-3.28	2.73	-1.17	-4.84
USA	1991	4.50	11.86	-7.37	3.26	-1.56	-9.07
Canada	1970	2.39	0.80	1.49	3.40	-0.43	-1.48
Canada	1980	3.20	5.74	-2.54	5.01	-0.66	-6.89
Canada	1991	6.89	9.39	-2.50	6.87	-0.75	-8.62
UK	1970	3.58	0.58	3.00	2.17	-0.08	0.91
UK	1980	9.08	3.48	5.60	4.36	-0.29	1.53
UK	1991	16.48	9.23	7.24	3.34	-0.42	4.32
Neth.	1970	4.83	3.76	1.08	0.58	-0.40	0.90
Neth.	1980	11.41	5.15	6.26	1.48	-0.76	5.54
Neth.	1991	12.02	15.09	-3.07	1.19	-1.04	-3.22
Belgium	1970	3.30	3.35	-0.05	1.34	-0.31	-1.08
Belgium	1980	9.93	5.01	4.93	4.11	-0.51	1.33
Belgium	1991	14.23	7.07	7.16	4.37	-0.66	3.45
France	1970	5.59	3.85	1.74	0.90	-0.82	1.66
France	1980	11.77	6.65	5.12	2.17	-0.98	3.93
France	1991	19.01	8.74	10.27	3.26	-1.21	8.22
Germany	1970	4.16	1.29	2.85	1.25	0.28	1.32
Germany	1980	11.04	3.41	7.62	3.20	0.24	4.18
Germany	1991	16.21	6.21	9.99	3.22	0.05	6.72
Austria	1970	7.58	1.28	6.30	1.21	0.23	4.86

Austria	1980	12.00	4.11	7.89	3.78	0.22	3.89
Austria	1991	15.55	4.47	11.08	5.66	0.17	5.25
Italy	1970	2.99	2.55	5.43	1.10	-0.22	4.55
Italy	1980	12.35	4.38	7.97	3.16	-0.41	5.22
Italy	1991	18.30	10.08	8.21	3.92	-0.48	4.77
Finland	1970	9.19	2.07	7.11	2.37	-0.24	4.98
Finland	1980	14.29	5.44	8.85	6.43	-0.32	2.74
Finland	1991	22.78	7.98	14.79	9.67	-0.58	5.70
Sweden	1970	6.09	0.26	5.81	5.51	-0.04	0.34
Sweden	1980	10.10	1.14	8.96	14.91	-0.36	-5.59
Sweden	1991	14.94	5.14	9.80	16.48	-0.50	-6.18
Norway	1970	4.58	0.59	3.99	2.27	-0.24	1.96
Norway	1980	8.37	8.92	-0.54	8.86	-0.01	-9.39
Norway	1991	15.02	10.38	4.63	12.25	-0.26	-7.36
Denmark	1970	0.80	2.46	5.51	4.74	-1.40	2.17
Denmark	1980	16.07	3.37	12.70	13.22	-0.48	-0.04
Denmark	1991	18.82	5.44	13.38	14.92	-0.70	-0.84
Japan	1970	5.57	5.77	-0.20	-0.28	-0.02	0.10
Japan	1980	11.18	9.81	1.37	0.46	-0.07	0.98
Japan	1991	13.08	15.19	-2.11	0.23	-0.10	-2.24
Australia	1970	1.39	6.09	-4.70	0.89	0.34	-5.93
Australia	1980	7.74	6.24	1.49	3.71	0.02	-2.24
Australia	1991	13.00	11.94	1.05	4.42	-0.13	-3.24
Average	1970	4.15	2.42	2.53	1.88	-0.25	0.91
Average	1980	10.03	5.20	4.83	5.17	-0.37	0.02
Average	1991	14.72	9.21	5.50	6.20	-0.54	-0.16

Note: Changes are relative to 1962; shares are given as percent of working age population.

Appendix B: Variable definitions and data sources

This appendix provides the exact definitions and data sources for the variables included in the statistical analyses.

Government transfers. All government payments to the civilian household sector, including social security transfers, government grants, public employee pensions, and transfers to non-profit institutions serving the household sector. Source: Cusack (1991) and OECD, *National Accounts, Part II: Detailed Tables* (various years).

Government consumption. Total government consumption of goods and services net of military spending as a percentage of GDP. Sources: Cusack (1991), OECD, *National Accounts, Part II: Detailed Tables* (various years), and *The SIPRI Year Book* (various years).

Deindustrialization. 100 minus the sum of manufacturing and agricultural employment as a percentage of the working age population. Source: OECD, *Labour Force Statistics* (various years).

Trade openness: Total exports and imports of goods and services as percentage of GDP. Source: OECD, *National Accounts, Part II: Detailed Tables* (various years).

Capital market openness. The index measures the extent to which capital markets are liberalized, and is presented in Quinn and Inclan (1997).

Left government center of gravity. This is an index of the partisan left-right "center of gravity" developed by Cusack (1997). It is based on (i) Castles and Mair's (1984) codings of government parties' placement on a left-right scale, weighted by (ii) their decimal share of cabinet portfolios. The index varies from 0 (extreme right) to 4 (extreme left), although most observations are much closer to the mean.

Electoral participation. Based on voter turnout rates as recorded on an annual basis in Mackie and Rose, the *European Journal of Political Research* and in International Institute for Democracy and Electoral Assistance (1997), *Voter Turnout from 1945 to 1997: A Global Report on Political Participation*. Stockholm: IDEA Information Services

Unexpected growth. Real GDP per capita growth at time t minus average real per capita growth in the preceding three years. The variable is defined in accordance with Roubini and Sachs (1989). Source: OECD, *National Accounts, Part II: Detailed Tables* (various years).

Income. Gross domestic product per capita in 1985 US dollars purchasing power equivalents. Source: Penn World Tables, Version 5.6.

Productivity growth. Annual rate of change in real value added per worker in industry and agriculture. Source: OECD, National Accounts CD-Rom (1995).

Trade Balances. Merchandise trade balance expressed as a percent of GDP for three country groupings (OECD, OPEC, Third Word). Source: IMF, *Directory of Trade Statistics Yearbooks* (various years).

Strength of labor. Measured as the product of union density and centralization. The density data is from Visser (1989; 1996), while the centralization data is from Iversen (1998).

Decentralization of government structures. A composite index based on five measures of the constitutional structure of the state. Source: Huber, Ragin, and Stephens (1993).

Capital formation: Gross capital formation as a percent of GDP. Source: Penn World Tables, Version 5.6.

$$Automatic\ transfers = generosity(t-1) \cdot \Delta \frac{unemployed + population{>}65}{population}(t),$$

where generosity is the percentage share of transfers in GDP relative to the percentage share of the dependent population in the total population at time *t-1*. Source: *Labour Force Statistics* (various years), and transfer data

$$Automatic\ consumption = \frac{gov\ consumption}{GDP}(t-1)\cdot\left(\frac{\Delta\ gov\ deflator(t)}{gov\ deflator(t-1)}\right)\Big/\left(\frac{\Delta GDP\ deflator(t)}{GDP\ deflator(t-1)}\right),$$

where *gov deflator* is the price deflator for government services, and *GDP deflator* is the price deflator for the whole GDP.

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Tables

Table 1. Structural Change, Absorptive Capacity, and the Effects of Government on Employment

		A Loss in Manuf. & Agric.	*B* Gain in Priv. Services	*C* *A* Not Absorbed by *B*	*D* Change in Gov.t Civ. Serv.	*E* Change in Military	*F* Not Absorbed
USA	1970	0.28	1.65	-1.37	0.70	-0.44	-1.63
USA	1980	1.92	5.20	-3.28	2.73	-1.17	-4.84
USA	1991	4.50	11.86	-7.37	3.26	-1.56	-9.07
Canada	1970	2.39	0.80	1.49	3.40	-0.43	-1.48
Canada	1980	3.20	5.74	-2.54	5.01	-0.66	-6.89
Canada	1991	6.89	9.39	-2.50	6.87	-0.75	-8.62
France	1970	5.59	3.85	1.74	0.90	-0.82	1.66
France	1980	11.77	6.65	5.12	2.17	-0.98	3.93
France	1991	19.01	8.74	10.27	3.26	-1.21	8.22
Germany	1970	4.16	1.29	2.85	1.25	0.28	1.32
Germany	1980	11.04	3.41	7.62	3.20	0.24	4.18
Germany	1991	16.21	6.21	9.99	3.22	0.05	6.72
Sweden	1970	6.09	0.26	5.81	5.51	-0.04	0.34
Sweden	1980	10.10	1.14	8.96	14.91	-0.36	-5.59
Sweden	1991	14.94	5.14	9.80	16.48	-0.50	-6.18
Denmark	1970	0.80	2.46	5.51	4.74	-1.40	2.17
Denmark	1980	16.07	3.37	12.70	13.22	-0.48	-0.04
Denmark	1991	18.82	5.44	13.38	14.92	-0.70	-0.84
Average*	1970	4.15	2.42	2.53	1.88	-0.25	0.91
Average	1980	10.03	5.20	4.83	5.17	-0.37	0.02
Average	1991	14.72	9.21	5.50	6.20	-0.54	-0.16

Notes: Changes are relative to 1962; shares are given as percent of working age population.

* Average for 15 OECD countries listed in Appendix A.

Table 2. Replicating Garrett's Regression Results (t-statistics in parentheses).

	Garrett's results		**Our results**	
	Transfers	Consumption	Transfers	Consumption
Lagged dependent level	-0.141***	-0.140***	-0.094***	-0.061***
	(-4.65)	(-5.49)	(-3.21)	(-3.55)
Trade openness	-0.008	-0.016*	0.005	0.004
	(-0.74)	(-1.73)	(0.50)	(0.44)
Capital openness	-0.192	-0.380**	-0.045	-0.012
	(-1.27)	(-2.45)	(-0.31)	(-0.12)
Left labor power (LLP)	0.067	0.134	0.116	0.196**
	(0.76)	(1.38)	(1.36)	(2.04)
LLP*Trade openness	0.001	0.001	-0.001	-0.001
	(0.41)	(1.00)	(-0.87)	(-0.86)
LLP*Capital openness	0.066**	0.075***	0.027	0.013
	(2.38)	(2.68)	(1.05)	(0.71)
Growth	-0.168***	-0.137***	-	-
	(-10.50)	(-11.53)		
Old population	0.135**	0.006	-	-
	(2.43)	(0.10)		
Unemployed	0.683***	0.008	-	-
	(3.67)	(0.42)		
Unexpected growth	-	-	-0.077***	-0.097***
			(5.75)	(12.14)
Automatic transfers	-	-	0.558***	-
			(6.93)	
Automatic consumption	-	-	-	0.970***
				(14.94)
Adjusted R-squared	0.42	0.48	0.42	0.67
Number of observations	350	350	350	350

Significance levels: * < 0.10; ** < 0.05; *** < 0.01

Note: The results for period and country dummies are not shown.

Table 3. Regression Results for Government Spending (t-scores in parentheses).

		Transfers	Consumption
	Lagged dependent level	-0.070***	-0.060***
		(-3.30)	(-4.23)
Globalization variables	Trade openness	-0.005	-0.004*
		(-1.12)	(-1.70)
	Δ Trade openness	0.018	-0.005
		(2.10)**	(-0.95)
	Capital openness	0.014	-0.005
		(0.49)	(-0.30)
	Δ Capital openness	0.017	-0.071**
		(0.30)	(-2.13)
Deindustrialization variables	Deindustrialization	0.043***	0.033***
		(3.02)	(3.39)
	Δ Deindustrialization	0.142***	0.093***
		(3.69)	(4.19)
Political variables			
	Left government CoG	-0.071	0.081***
		(-1.41)	(2.41)
	Δ Left government CoG	0.021	0.030
		(0.32)	(0.74)
	Electoral participation	0.659	0.010**
		(-0.86)	(2.27)
	Strength of labor	-0.001	0.009***
		(-0.06)	(3.00)
	Decentralization of government power	-0.218	-0.274*
		(-1.23)	(-1.79)
Controls			
	Unexpected growth	-0.076***	-0.092***
		(6.38)	(14.59)
	Automatic transfers	0.845***	
		(9.55)	
	Automatic consumption		0.980***
			(16.03)
	Adjusted R-Squared	0.47	0.63
	Number of observations	495	495

Significance levels: * < 0.10; ** < 0.05; *** < 0.01

Note: The results for country dummies are not shown.

Table 4. Regression Results for Industrialization (t-scores in parentheses).

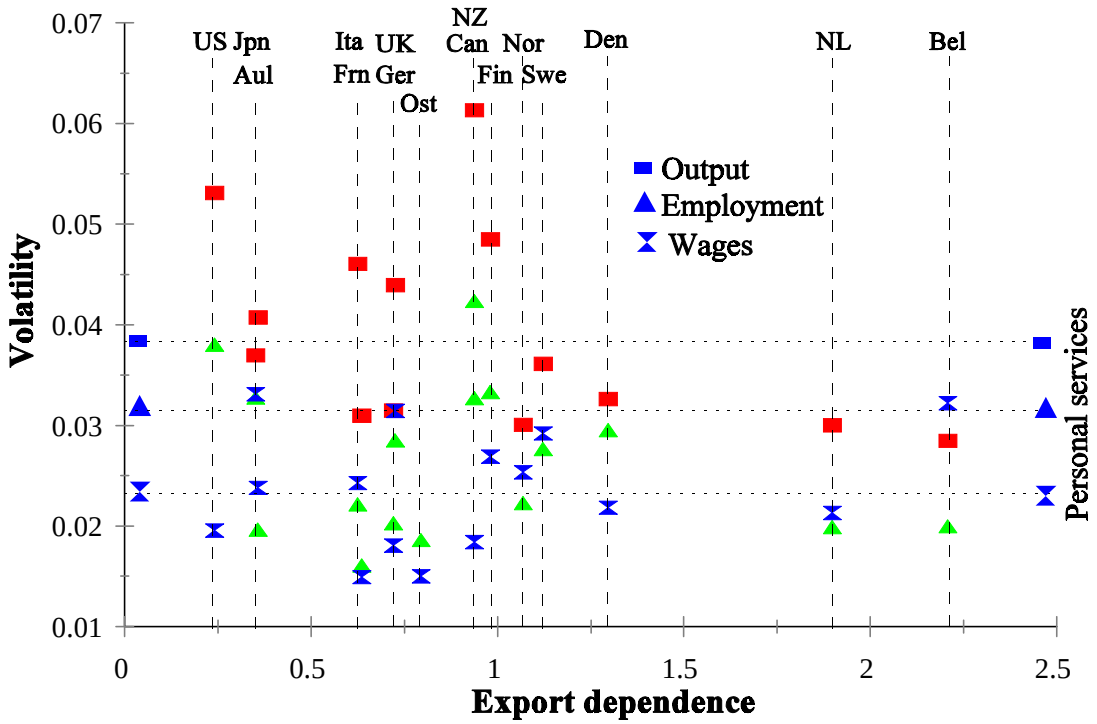
Endogenous variables		**Exogenous variables**	
[Lagged level]	-0.113***	Capital openness	0.001
	(-5.27)		(0.30)
Productivity growth	-0.353***	Δ Capital openness	0.001
	(9.09)		(0.50)
Income	0.523**	OECD trade balance	0.002***
	(2.18)		(3.47)
Income squared	-0.30**	Δ OECD trade balance	0.004***
	(2.24)		(4.43)
Growth in income	0.585***	OPEC trade balance	-0.004*
	(8.50)		(-1.96)
Capital formation	0.032***	Δ OPEC trade balance	-0.003
	(5.53)		(-1.35)
Government Transfers	-0.001	LDC trade balance	-0.003**
	(-0.99)		(-2.12)
Government Consumption	0.001	Δ LDC trade balance	-0.002
	(0.30)		(-1.19)
Increase in explained var.	35%		5%
Adjusted R-Squared			0.52
Number of observations	378		378

Significance levels: * < 0.10; ** < 0.05; *** < 0.01

Notes: The increase in explained variance is the change in R-squared when the set of endogenous and exogenous variables are added to a model where these variables are excluded. The results for country dummies are not shown.

Figures

Figure 1. Trade Dependence and Manufacturing Volatility



Notes: Export dependence is the total value of manufacturing exports divided by value added; volatility is the standard deviation in the rate of growth in manufacturing output, employment, and wages in the period 1970-93. Output data is not available for Austria; only employment data is available for New Zealand.

Sources: OECD, *The OECD STAN Database* (1994).

Figure 2. Trade Openness and Losses in Traditional Sectors

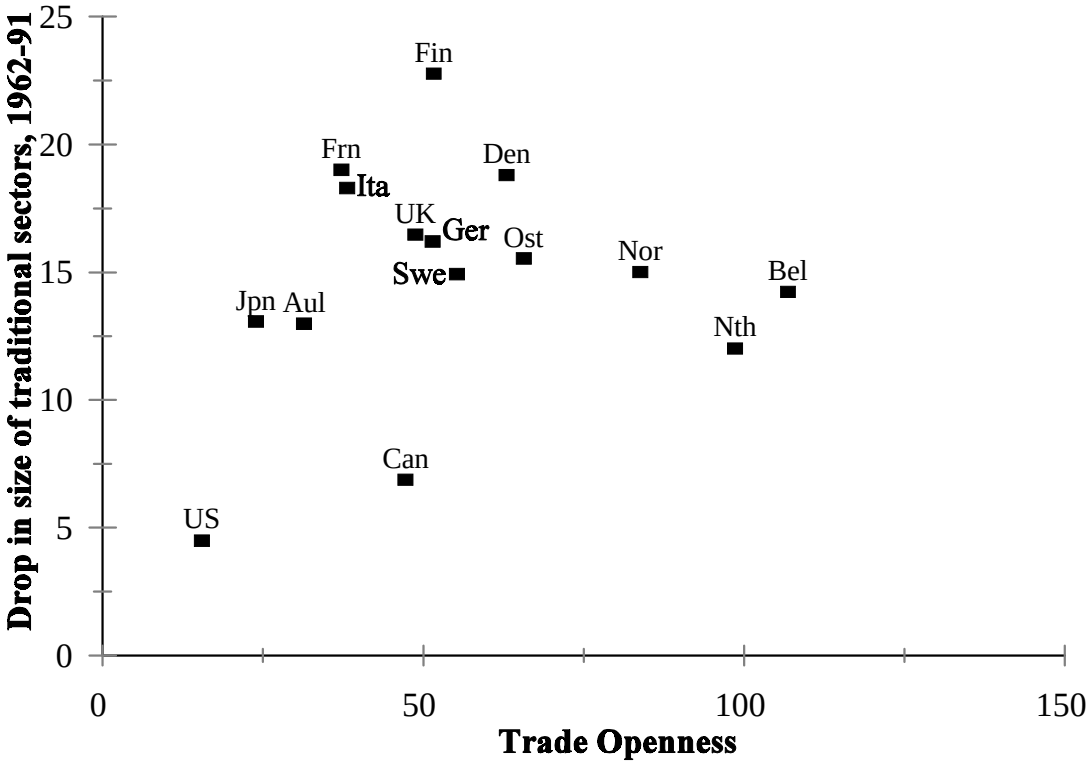


Figure 3. Initial Size and Losses in Traditional Sectors